

Multidisciplinary interventions for the prevention of aspiration pneumonia in super-aged societies: A scoping review

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Abstract: Aspiration pneumonia is associated with significant morbidity and is a leading cause of mortality among older adults, with a disproportionately high burden in super-aged societies such as Japan. Despite international guidelines recommending a multidisciplinary team (MDT) approach, evidence supporting collaborative interventions remains fragmented. We conducted a scoping review, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews guidelines, to map multidisciplinary interventions for aspiration pneumonia prevention. MEDLINE, the Cochrane Library, and the Cumulative Index to Nursing and Allied Health Literature were searched through December 2024 for studies involving three or more healthcare disciplines. Among the 309 identified studies, 10 met the inclusion criteria. All included studies targeted primary prevention in high-risk populations; none addressed recurrence prevention, despite 30-day recurrence rates reaching approximately 30%. MDTs consistently included physicians, nurses, and speech-language pathologists, whereas pharmacists (2/10) and dental professionals (2/10) were relatively underrepresented, despite robust evidence supporting interventions within these professional domains. Seven studies reported a significant reduction in the incidence of aspiration pneumonia; however, the only randomized controlled trial showed no effect on pneumonia. The current evidence base, predominantly comprising observational and quality improvement studies, should be interpreted as preliminary and heterogeneous in terms of study design and outcome measurement. Evidence gaps remain in secondary and tertiary prevention and optimal team composition. Future trials in patients with prior aspiration pneumonia should investigate whether incorporation of professionals from disciplines with established intervention effectiveness, such as pharmacists and dental professionals, into MDTs translates into improved aspiration pneumonia outcomes.

Keywords: aspiration pneumonia, multidisciplinary team, aged, dysphagia, scoping review

1. Introduction

Population aging is accelerating worldwide, with the number of adults aged 65 years projected to double to 1.6 billion by 2050 (1). Japan, the world's leading super-aged society (defined as $\geq 21\%$ of the population aged ≥ 65 years), with 29.3% of the population at age 65 years or older (2), exemplifies the healthcare challenges arising from this demographic shift. Among the most pressing is aspiration pneumonia, which poses a disproportionate burden in Japan, accounting for $> 60\%$ of community-acquired pneumonia hospitalizations (3,4), compared with only 5%–15% in Western countries (3,5). This disparity highlights a unique, yet increasingly global, challenge of managing this complex and multifactorial condition in aging populations.

Aspiration pneumonia in older adults cannot be

adequately managed using respiratory expertise alone. Komiya *et al.* (6) demonstrated that approximately 73% of older patients with pneumonia were treated by non-pulmonologists, with no significant differences in mortality compared with pulmonologist-managed cases. This finding suggests that aspiration pneumonia management extends beyond traditional respiratory medicine and requires the coordinated efforts of multiple healthcare professionals addressing its multifactorial nature.

International guidelines support this multidisciplinary approach. The British Thoracic Society Clinical Statement emphasizes that the prevention, identification, and treatment of aspiration pneumonia require a multidisciplinary team (MDT) approach involving physicians, nurses, speech-language pathologists (SLPs), nutritionists, pharmacists, and physical/occupational

therapists (3). Similarly, the World Health Organization's Integrated Care for Older People framework identifies domains such as malnutrition, mobility limitations, and cognitive decline that require coordinated MDT interventions (7). Recent efforts to systematize clinical approaches, including the "Diagnose, Treat, and SUPPORT" framework by Yoshimatsu *et al.* (8), cited in the Japanese Respiratory Society guidelines (9), have emphasized multidisciplinary collaboration as a core competency. However, although their framework identified multidisciplinary collaboration as essential, the cited evidence focused primarily on individual interventions rather than on coordinated collaborative care models.

Despite the recognized importance of multidisciplinary collaboration, the evidence base remains fragmented, with a limited understanding of how various interventions function synergistically in team-based approaches. Our previous scoping review (10) found limited evidence for the effectiveness of swallowing rehabilitation in patients with aspiration pneumonia, highlighting the need for comprehensive collaborative strategies.

To address these knowledge gaps, we conducted a scoping review to systematically map the existing evidence on MDT collaborative interventions for aspiration pneumonia. Our primary aims were to *i*) identify and categorize different models of multidisciplinary care for aspiration pneumonia management, *ii*) examine the effectiveness of collaborative interventions on clinical outcomes, and *iii*) identify the gaps and areas that require further investigation. This review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines.

2. Literature search strategy and process

2.1. Study design and framework

This review was designed and conducted in accordance with the PRISMA-ScR guidelines (11) and the methodological framework proposed by Arksey and O'Malley (12) to ensure methodological rigor and transparency.

2.2. Search strategy

A comprehensive search was performed on August 27, 2025, targeting studies published until December 31, 2024. Three databases were searched: MEDLINE (via PubMed), the Cochrane Library, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). The search strategy combined terms related to aspiration pneumonia and multidisciplinary care: ("aspiration pneumonia") AND ("multidisciplinary" OR "interdisciplinary" OR "interprofessional" OR

"collaborative" OR "medical team"). The search was limited to human studies published in English. The complete search strategy with all terms is provided in Supplementary Appendix S1 (<https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=124>).

2.3. Eligibility criteria

Studies were selected using the Population, Concept, and Context framework. The population included patients diagnosed with aspiration pneumonia and high-risk groups, such as older adults with dysphagia, post-stroke patients, and individuals with neurodegenerative diseases. Eligible studies described collaborative MDT interventions involving professionals from three or more healthcare disciplines working together in a coordinated manner. This threshold was adopted to differentiate multidisciplinary intervention research from routine clinical practice. Definition of MDTs as teams comprising professionals from two or more disciplines would include physician–nurse collaborations, which represent the standard composition of inpatient care across virtually all hospitalized patients, rendering the analytical distinction between multidisciplinary interventions and conventional clinical practice less meaningful. For Context, no restrictions were applied to healthcare settings. The exclusion criteria were pediatric populations, single- or two-discipline interventions, case reports, letters, editorials, conference abstracts, review articles, guidelines, commentaries, non-English full-text articles, preprints, protocol papers without results, and qualitative studies.

2.4. Study selection and data extraction

Title and abstract screening was initially conducted by one researcher according to the predefined eligibility criteria, and the screening decisions were subsequently verified by a second researcher through independent review of the screening list. Discrepancies between the two researchers were resolved through discussion until a consensus was reached. Articles that met the inclusion criteria underwent full-text review, and ambiguous cases were similarly resolved by consensus between the two researchers. Data were extracted using a standardized form, summarizing the study characteristics, participating professionals and their disciplines, nature of interventions, outcome definitions, and main findings. The study selection process adhered to the PRISMA-ScR framework (Figure 1).

3. Evidence overview

3.1. Search results and study selection

The initial database search yielded 309 articles from MEDLINE ($n = 156$), Cochrane Library ($n = 14$), and

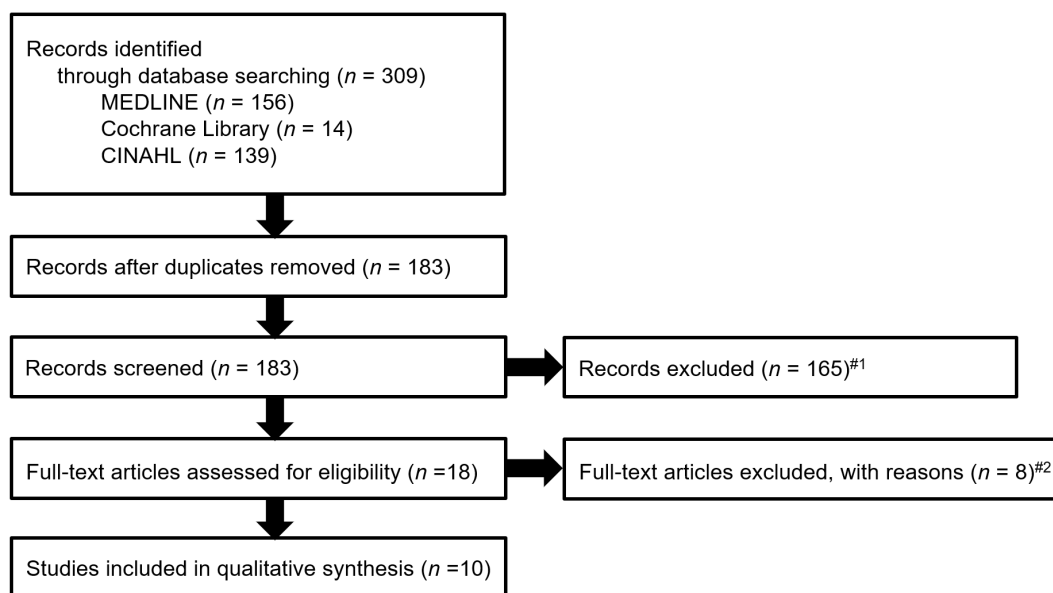


Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) flow diagram for study selection. ^{#1} indicates the records excluded during title and abstract screening ($n = 165$), and ^{#2} indicates the full-text articles excluded after the eligibility assessment ($n = 8$).

CINAHL ($n = 139$). After removing the duplicates, 183 unique records were retained for screening. After screening the titles and abstracts, 18 full-text articles were assessed for eligibility. Eight articles were excluded during the full-text review: two did not evaluate aspiration pneumonia prevention, four did not address multidisciplinary collaboration, one was a descriptive study without control groups, and one had data inconsistencies between the abstract and results. Finally, 10 studies met the inclusion criteria (Figure 1).

3.2. Study characteristics

The 10 included studies (13-22) spanned nearly three decades (1995–2024) and used various designs: before-after studies ($n = 3$), quality improvement projects ($n = 3$), retrospective cohort studies ($n = 3$), and one randomized controlled trial (RCT) cluster. All the studies focused on high-risk populations rather than on patients with established aspiration pneumonia. The target population included post-stroke patients with dysphagia ($n = 3$), acute stroke patients ($n = 2$), older adults with swallowing disorders ($n = 2$), mixed-risk populations ($n = 2$), and older orthopedic patients ($n = 1$). The key characteristics and findings are summarized in Table 1.

3.3. Multidisciplinary team composition and interventions

The teams comprised professionals from three to seven healthcare disciplines. The most frequently represented professionals were nurses ($n = 10$), physicians ($n = 9$) and SLPs ($n = 9$). Dietitians and physical/occupational therapists were each represented in five studies, whereas

pharmacists and dental professionals were included in only two studies. Interventions were categorized as comprehensive care pathways ($n = 4$), multidisciplinary rounds/teams ($n = 3$), quality improvement initiatives ($n = 3$), and standardized screening protocols ($n = 2$). The key components included dysphagia screening and assessment ($n = 7$), nutritional management ($n = 2$), medication management ($n = 2$), staff education and training ($n = 2$), communication protocols ($n = 2$), and oral care optimization ($n = 1$). As interventions were often multicomponent, the categories were not mutually exclusive.

3.4. Clinical outcomes

All the studies reported the incidence of aspiration pneumonia. Seven studies showed statistically significant reductions, one reported the elimination of new cases without statistical analysis, and two showed no significant differences. Notably, the only RCT cluster by Middleton *et al.* (15) demonstrated that a standardized multidisciplinary protocol reduced death and disability but did not significantly reduce the incidence of pneumonia.

4. Synthesis and implications

4.1. Effectiveness and limitations of current evidence

Most studies (7/10) reported statistically significant reductions in the incidence of aspiration pneumonia, suggesting the potential effectiveness of collaborative MDT approaches. However, this evidence remains preliminary and heterogeneous, and several important

Table 1. Summary of included studies: Multidisciplinary approaches to aspiration pneumonia prevention

No.	Authors (Year)	Title	Journal, volume (number): pages	Study design	Key findings	Multidisciplinary team composition
1	Webb DJ <i>et al.</i> (1995)	Effects of a Specialized Team on Stroke Care: The First Two Years of the Yale Stroke Program	Stroke, 26(8):1353-1357	Before-after study	Introduction of a specialized stroke team reduced length of hospital stay and urinary tract infections but did not change aspiration pneumonia incidence	Physicians, nurses, PTs/OTs
2	Rather MR <i>et al.</i> (2010)	Impact of a Stroke Admission Protocol—A Quality Improvement Project	J Clin Outcomes Manag, 17(2):75-85	Quality improvement (QI) project	Implementation of a standardized admission protocol improved adherence and reduced complications, including aspiration pneumonia	Physicians, nurses, SLPs, PTs/OTs
3	Middleton S <i>et al.</i> (2011)	Implementation of Evidence-Based Treatment Protocols to Manage Fever, Hyperglycemia, and Swallowing Dysfunction in Acute Stroke (QASC): A Cluster Randomized Controlled Trial	Lancet, 378(9791):1699-1706	Cluster randomized controlled trial	Stroke unit protocols for fever, glucose, and swallowing management reduced death and disability but did not significantly reduce pneumonia	Physicians, nurses, SLPs
4	Gandolfi M <i>et al.</i> (2014)	Improving Post-Stroke Dysphagia Outcomes Through a Standardized and Multidisciplinary Protocol: An Exploratory Cohort Study	Dysphagia, 29(6):704-712	Retrospective cohort study	A standardized multidisciplinary dysphagia protocol for reducing aspiration pneumonia, in-hospital mortality, and tube feeding at discharge	Physicians, nurses, SLPs, dietitians, PTs/OTs
5	Aoki S <i>et al.</i> (2016)	The Multidisciplinary Swallowing Team Approach Decreases Pneumonia Onset in Acute Stroke Patients	PLoS One, 11(5):e0154608	Before-after study	Establishment of a multidisciplinary swallowing team reduced aspiration pneumonia incidence from 15.9% to 6.9% in patients with acute stroke	Physicians, nurses, SLPs, dietitians, PTs/OTs, pharmacists, dental professionals
6	Sakakura K <i>et al.</i> (2017)	Impact of a Multidisciplinary Round Visit for the Management of Dysphagia Utilizing a Wi-Fi-Based Wireless Flexible Endoscopic Evaluation of Swallowing	Ann Otol Rhinol Laryngol, 126(1):47-53	Retrospective cohort study	Use of Wi-Fi-based FEES during multidisciplinary rounds reduced aspiration pneumonia incidence (51.6%→13.9%) and improved FOIS scores	Physicians, nurses, SLPs, dietitians, dental professionals
7	O'Malley MB <i>et al.</i> (2018)	Project SITUP: An Interdisciplinary Quality Improvement Initiative to Reduce Aspiration Pneumonia	J Nurs Care Qual, 33(2):116-122	QI project	An interprofessional algorithm for aspiration risk screening reduced aspiration pneumonia incidence from 12 to 7 cases per 1000 patients	Physicians, nurses, SLPs
8	Teeling SP <i>et al.</i> (2019)	Reducing Risk of Nutritional Deficits by Optimizing Access to Mealtime Assistance: A Lean Six Sigma Quality Improvement Project	Int J Qual Health Care, 31(Suppl 1):6-13	QI project	A Lean Six Sigma-based feeding assistance program eliminated new cases of aspiration pneumonia and improved nutrition while reducing food waste	Nurses, SLPs, dietitians
9	Taveira I <i>et al.</i> (2021)	Recognizing Dysphagia: Implementation of an In-Hospital Screening Protocol	Irish J Med Sci, 190(2):605-608	Before-after study	Hospital-wide dysphagia screening protocol reduced aspiration pneumonia incidence (from 11.7% to 2.4%) and mortality	Physicians, nurses, SLPs
10	Higashikawa T <i>et al.</i> (2024)	Orthogeriatric Co-Management at a Regional Core Hospital as a New Multidisciplinary Approach in Japanese Hip Fracture Operation	J Orthop Sci, 29(4):273-277	Retrospective cohort study	Orthogeriatric co-management, including swallowing assessment and pharmacist input, reduced aspiration pneumonia (7.1%→2.4%) and shortened hospital stay	Physicians, nurses, SLPs, dietitians, PTs/OTs, pharmacists

Abbreviations: SLPs, speech-language pathologists; PTs, physical therapists; FEES, fiberoptic endoscopic evaluation of swallowing; FOIS, Functional Oral Intake Scale.

limitations must be considered. The predominance of before-and-after studies and quality improvement projects, with only one RCT, limit the strength of the conclusions. The sole RCT cluster by Middleton *et al.* (15) showed no significant effect on pneumonia incidence, suggesting that the effects demonstrated in observational studies may not be reproducible with more rigorous designs.

Beyond the overall effectiveness of MDT approaches, each of the four functional intervention components central to aspiration pneumonia prevention—dysphagia screening, oral care, medication review, and nutritional management—have an established evidence base at the component level. Regarding dysphagia screening and management, screening serves as the foundational process for identifying patients at risk of aspiration, and our previous scoping review (10) demonstrated that subsequent compensatory approaches such as postural adjustments and food texture modification have shown effectiveness, consistent with the European Society for Swallowing Disorders and European Union Geriatric Medicine Society white paper (23). For nutritional management, the same scoping review (10) supports the effectiveness of dietary texture modification as part of compensatory strategies for reducing the aspiration risk. With respect to oral care, systematic reviews have provided robust evidence of pneumonia prevention in hospitalized older adults and nursing home residents (24,25). Regarding medication review, a systematic review (26) and individual studies have demonstrated

the effectiveness of pharmacological interventions in the reduction of aspiration pneumonia (27-29). Thus, each of the four functional domains is supported as a component of comprehensive aspiration pneumonia prevention by existing evidence, providing the conceptual basis for the multidisciplinary framework illustrated in Figure 2.

A structured assessment of heterogeneity across the included studies revealed substantial variability among the four dimensions. First, the populations ranged from patients with acute stroke to long-term care residents and patients across multiple diagnostic groups, with widely differing baseline aspiration risk profiles. Second, the settings included acute care hospitals, rehabilitation units, long-term care facilities, and mixed settings, each with distinct staffing patterns, care continuity, and resource availability. Third, the components (combinations of dysphagia screening, oral care, medication review, and nutritional management), intensity (from single-discipline protocols to comprehensive team-based bundles), and duration of interventions varied considerably. Fourth, the outcomes of pneumonia incidence, mortality, length of stay, and process measures, were often defined heterogeneously across studies. This substantial heterogeneity inherently limits the comparability of findings across studies and the strength of conclusions that can be drawn from this body of evidence.

4.2. Gap in secondary and tertiary prevention

All identified studies targeted primary prevention in

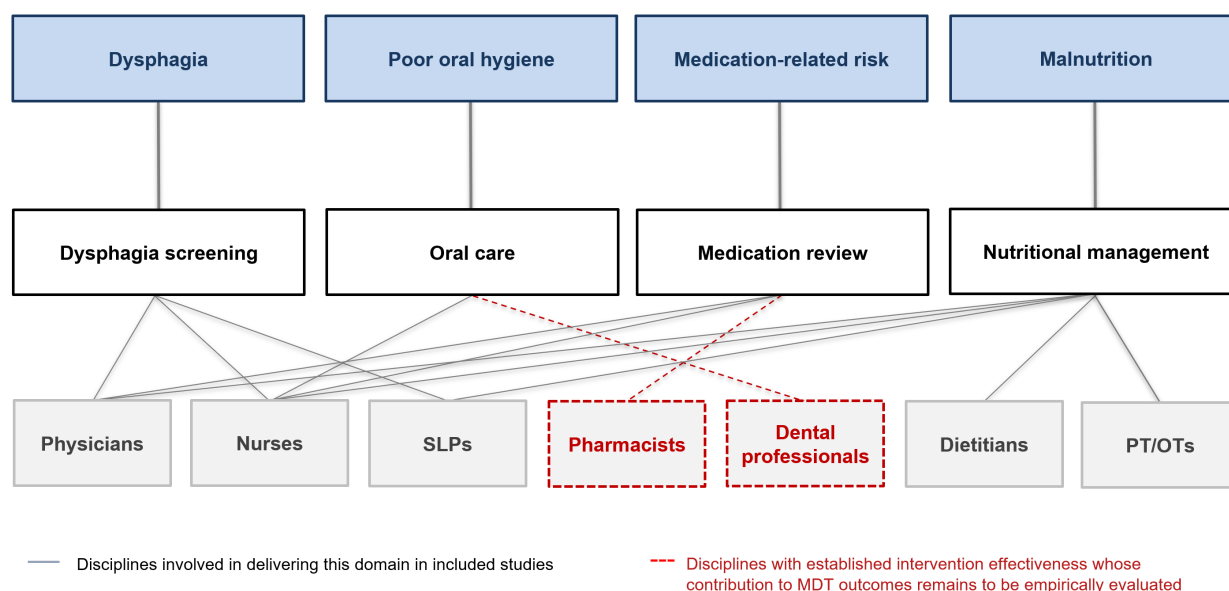


Figure 2. Conceptual framework: MDT interventions for aspiration pneumonia prevention. The framework integrates three layers: aspiration pneumonia risk factors (upper layer: dysphagia, poor oral hygiene, medication-related risk, and malnutrition), four functional intervention domains identified in this review (middle layer: dysphagia screening, oral care, medication review, and nutritional management), and professionals from seven healthcare disciplines (lower layer: physicians, nurses, speech-language pathologists, pharmacists, dental professionals, dietitians, and physical/occupational therapists). Solid lines indicate professionals involved in delivering each intervention domain across the included studies. Dashed red lines and dashed red boxes indicate pharmacists and dental professionals, whose intervention effectiveness has been established but whose contribution to MDT outcomes in aspiration pneumonia prevention remains to be empirically evaluated. *Abbreviations:* MDT, multidisciplinary team; SLPs, speech-language pathologists; PT/OTs, physical/occupational therapists.

high-risk populations, and no study examined MDT interventions in patients who had already developed aspiration pneumonia; therefore, the aspects of recurrence prevention and long-term sequela management remain essentially unaddressed. This constitutes a critical evidence gap, particularly because of the high recurrence rates. Ocrospoma and Restrepo (30) reported 30-day recurrence rates of approximately 30%, with mortality rates as high as 30% at 30 days and 70% at 2 years after admission. Noguchi *et al.* (31) further demonstrated that recurrence within 30 days increased from 13.0% for patients with 0–1 risk factor to 54.2% for those with 4 risk factors, highlighting the substantial burden and poor prognosis associated with this condition. Given the disproportionate burden of aspiration pneumonia in Japan (4) and the demographic trajectory of other aging societies, establishment of evidence for both recurrence prevention and sustained post-acute care is an urgent priority. The absence of MDT-based research addressing these aspects represents a critical knowledge gap that warrants prioritization in future research.

Although no included study examined MDT interventions for recurrence prevention, evidence does exist for individual intervention components that have demonstrated effectiveness in aspiration pneumonia prevention in high-risk populations, including pharmacological interventions (27,32–34) and oral hygiene interventions (24,25). The effectiveness of these intervention components, when systematically incorporated into MDT models, in preventing recurrence in patients with previous aspiration pneumonia needs to be empirically evaluated. Notably, medication review and oral care were among the less frequently incorporated interventions in the MDT models identified in this review, with medication review implemented in 2 of the 10 included studies and oral care in only 1 included study. Future studies should be specifically designed for the setting of recurrence prevention, examining whether the systematic incorporation of pharmacist-led medication review and dental professional-led oral care into MDT strategies translates into reduced recurrence in patients with previous aspiration pneumonia.

4.3. Underrepresentation of pharmacists and dental professionals

Analysis of the MDT composition revealed a core triad of physicians, nurses, and SLPs, with relatively limited participation of pharmacists (2/10 studies) and dental professionals (2/10 studies). This pattern raises questions, given that interventions within these professional domains, such as pharmacological optimization and oral hygiene care, have demonstrated effectiveness in preventing aspiration pneumonia in other study contexts. Santos *et al.* (26) examined 13 intervention studies for aspiration pneumonia prevention and demonstrated positive results in three pharmacological

intervention studies (32–34) and one oral hygiene study (35). Regarding pharmacological interventions, Arai *et al.* (27) showed that angiotensin-converting enzyme inhibitors significantly reduced the risk of aspiration pneumonia. Additionally, our analysis using the Japanese Adverse Drug Event Report database (28) revealed that anticholinergic drugs with dopamine-blocking properties are the primary risk factors for aspiration pneumonia, which requires the expertise of pharmacists. Notably, the 2022 revision of Japanese healthcare reimbursement removed pharmacists from becoming mandatory members of the multidisciplinary dysphagia team (29). Nevertheless, our clinical study demonstrated that 22.0% of patients requiring MDT dysphagia intervention required pharmaceutical intervention (29). The effect of the 2022 reimbursement change on the quality of multidisciplinary dysphagia care remains an empirical question that warrants further investigation. To our knowledge, no study has directly evaluated whether the incorporation of pharmacists or dental professionals into MDTs improves aspiration pneumonia outcomes; this absence of direct evidence itself constitutes an important research gap.

Systematic reviews have provided robust evidence regarding oral care. Sjögren *et al.* (24) found absolute risk reductions of 6.6–11.7% for oral hygiene interventions in hospitalized older adults and nursing home residents, and Kaneoka *et al.* (25) demonstrated a significant reduction in pneumonia risk (risk ratio, 0.61; 95% confidence interval: 0.40–0.91; $p = 0.02$) in non-ventilated patients. Prospective studies should determine whether the underrepresentation of these disciplines in current MDT models reflects a missed opportunity for optimization, or whether their integration would translate into measurable outcome improvements.

4.4. Role distribution and evidence-based effectiveness of different disciplines

Our previous scoping review (10) revealed that evidence for exercise-based swallowing rehabilitation in aspiration pneumonia prevention remains limited, although compensatory approaches such as dietary texture modification and postural adjustments have shown effectiveness. This is consistent with the white paper of the European Society for Swallowing Disorders and European Union Geriatric Medicine Society (23), which emphasizes the importance of compensatory strategies in older adult populations. This suggests that effective aspiration prevention may benefit from a distributed approach in which each discipline contributes specific expertise to complementary intervention strategies rather than relying primarily on any single professional group. In healthcare settings where SLPs, who play a central role in swallowing rehabilitation, may not be permanently available, foundational aspiration prevention interventions can still be effectively delivered through

collaboration among dietitians, physical/occupational therapists, and nursing staff, although specialized dysphagia assessment remains within the scope of SLP practice.

4.5. Factors affecting the effectiveness of multidisciplinary collaboration

Whether involving more disciplines is more effective in the management of aspiration pneumonia has not yet been verified. Previous studies have emphasized that the effectiveness of MDTs depends largely on communication, coordination, and collaborative interactions rather than the number of participating disciplines (36,37). What appears crucial is not simply the size of the team but the quality of collaboration within it. Future studies should focus on a detailed analysis of the specific intervention content delivered by each discipline, interactions between interventions, and mechanisms by which they affect outcomes, to identify the most effective MDT collaboration models.

4.6. Implications for super-aged societies worldwide

Although the disproportionate burden of aspiration pneumonia in Japan provides a particularly compelling case for optimizing MDT approaches, the challenges identified in this review are relevant globally. As the population ages worldwide, healthcare systems increasingly face the need to develop efficient, evidence-based, and collaborative care models for aspiration pneumonia prevention. The gaps identified in study design quality, team composition, and prevention strategies beyond the primary level represent priorities for the international research community. Developing cost-effective intervention models adaptable to diverse healthcare settings, including resource-limited environments, is essential for addressing this growing global health challenge.

4.7. Limitations

This study has several limitations. First, the inclusion criterion of professionals from three or more disciplines may have excluded effective two-discipline collaborations. However, this threshold was necessary to ensure that included studies addressed the multifactorial nature of aspiration pneumonia and to differentiate multidisciplinary intervention research from studies describing routine collaborative care. Second, our search was limited to MEDLINE, the Cochrane Library, and CINAHL, potentially missing relevant studies from other databases. Furthermore, our search strategy required explicit terms reflecting multidisciplinary or interprofessional care, and this may have excluded studies describing collaborative interventions under alternative terminology. This limitation reflects an inherent trade-off between specificity

and sensitivity in search strategies for scoping review. Third, the heterogeneous definitions and implementation methods of "multidisciplinary interventions" across studies limited the detailed analysis of specific intervention content. In addition, the definition of aspiration pneumonia varied across the included studies. As we have previously demonstrated (38), the lack of unified diagnostic criteria for aspiration pneumonia poses inherent challenges for outcome comparison across studies. Finally, the screening process involved one reviewer with verification by a second reviewer. Although this approach is consistent with the methodological flexibility permitted in scoping review guidelines, including the Joanna Briggs Institute methodology, and discrepancies were resolved by consensus, the possibility of selection bias cannot be entirely excluded.

5. Conclusions

This scoping review identified 10 studies examining MDT interventions for aspiration pneumonia prevention, revealing critical gaps: predominance of observational study designs, exclusive focus on primary prevention despite high recurrence rates, and limited participation of pharmacists and dental professionals in MDTs despite the established effectiveness of interventions within these professional domains. The current evidence base remains preliminary, with substantial heterogeneity in study designs, populations, and outcome definitions, precluding definitive conclusions regarding the comparative effectiveness of specific MDT compositions or intervention components. Future studies should prioritize rigorous RCTs targeting patients with established disease, determine whether the inclusion of underrepresented disciplines with proven intervention effectiveness translates into improved clinical outcomes, and develop comprehensive care models that address the complex and multifactorial nature of aspiration pneumonia across diverse healthcare systems facing population aging.

Funding: None.

Conflict of Interest: The authors have no conflicts of interest to disclose.

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- Received April 22, 2026; Revised May 20, 2026; Accepted June 9, 2026.
- Released online in J-STAGE as advance publication June 23, 2026.
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